BY ORDER OF THE COMMANDER
AIR FORCE RESERVE COMMAND

AIR FORCE RESERVE COMMAND
HANDBOOK 32-1001
19 June 1998

Civil Engineering
STANDARD FACILITY REQUIREMENTS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This handbook contains guidelines and information for facility requirements in support of Air Force Reserve Command missions. The criteria in this handbook represent standard space allowances authorized. These guidelines apply to key personnel in AFRC civil engineering, and to key personnel in other AFRC organizations who allocate space in existing facilities or develop or approve facility requirements. The use of existing facilities will conform to criteria contained within this handbook as nearly as possible; however, the physical configuration of the existing structures may require variances from these guidelines. Criteria for items not addressed in this handbook can be found in AFH 32-1084, *Facility Requirements*.

SUMMARY OF REVISIONS
This handbook is revised in its entirety.

Chapter 8 - Category Group 42, Explosives Storage

Chapter 9 - Category Group 44 & 45 -Storage Facilities, Covered/Open, and Special Purpose

Chapter 10 - Category Group 61, Administrative Facilities

Chapter 1

OVERVIEW

1.1. Purpose. The guidelines in this handbook are applicable to the Air Force Reserve Command (AFRC) and implement DOD construction criteria directives.

1.2. Requirements and Criteria Development:

1.2.1. The criteria in this handbook is the recommended space allowances authorized within AFRC. Actual space requirements for each facility (existing or to be constructed) are programmed and justified on the basis of the authorized unit strength and the quantity and type of equipment and supplies. The use of existing facilities should conform to the criteria as nearly as possible; however, it is recognized that physical characteristics of existing structures will, in some cases, restrict adherence. The large variety of configurations of our units and functions within our units makes it impractical to provide a handbook which addresses every conceivable configuration. Work unique requirements are on a case-by-case basis.

1.2.2. All facility space requirements are given in terms of net area, unless noted otherwise. Gross area can be computed by use of noted factors and include the entire facility to the outside enclosure walls.

1.2.3. The space allowances for communications closets and electrical closets are intended for planning purposes and are not to be taken as design criteria.

1.2.4. When more than one activity occupies a single facility, proportion overhead space (mechanical rooms, halls, etc.) appropriately.

1.2.5. Program joint use projects to the maximum extent practicable where the ANG, Active Force, and Air Force Reserve Command (AFRC) are collocated. Consider facilities such as medical training, dormitories, dining halls, bulk fuel storage, vehicle maintenance, communications centers, small arms ranges, fire stations, munitions/pyrotechnics storage facilities, etc, for joint use.

1.3. Base Operating Support (BOS) - Wing Functions. The requirements for the base operating support (BOS) functions listed can be found in Paragraph 6.3.1. wings/groups:
   1.3.1   Financial Management (Budget Office).
   1.3.2. Civilian Personnel.
   1.3.3. Military Personnel Flight.
   1.3.4. Contracting.
   1.3.5. Social Actions.
   1.3.6. Public Affairs.
   1.3.7. Judge Advocate.
   1.3.8. Chaplain.
   1.3.9. Safety.

1.4. Base Operating Support (BOS) - AFRC Host Base Functions. The requirements for the BOS functions listed in paragraph 1.4.1. through paragraph 1.4.7. are indicated here for convenience even though some may have separate category codes.

1.4.1. Security Forces Squadron at AFRC Bases. This is a combination of Law Enforcement and the Security Forces Squadron on an AFRC base.

SECURITY FORCES OPERATIONS	SCOPE (SF)
Chief	140
Chief, SF Operations Branch	120
Force Protection/Plans Programs/Senior NCO (Note 1)	200
Chief, SF Administration	120
Information Security (2 @ 85 SF)	170
Pass & Registration/Waiting Area	200
Chief, SF Training and Resources	120
Training Instructor (SFTT & SFTC, 2 @ 100 SF	200
Training Instructor Support, 2 TR @ 50 SF)	100
Classroom (Dividable)	900
Orderly Room/Administration, 200 SF + 2 TR @ 50 SF	300
Security Forces Manager	100
Quality Control NCO, 100 SF + 2 TR @ 50 SF (Note 2)	200
Unit Learning Center	150
Shift Supervisors/Flight Chiefs/Leaders x 3 shifts	120
Law Enforcement Desk/CSC/Battle Staff	400
Mobility Assistant, 2 TR @ 50 SF	100
Armory	300
Evidence Storage Room	50
Lost and Found Property	50
Officer Report Writing Room, 2 @ 60 SF	120
Interrogation/Interview Room (Note 3)	100
Gun Cleaning Area	100
Break Room	200
General Storage	150
Mobility/Supply Storage (Note 4)	2,500
Men's Locker/Shower	350
Women's Locker/Shower	120
First Sergeant	100
Superintendent	100
Squad Leaders (3 @ 85 SF)	255
Fire Team Leaders Administration (3 @ 85 SF)	255
Career Advisor/Safety/Historian/DP	100
Communications/Electrical	250
Subtotal	8,740
Overhead (30%)	2,620
TOTAL	11,360

Notes:
 1: Applicable to 439/452/482 SFS only, others are 100 SF.
 2: Includes QC test area.
 3: Includes one-way glass room.
 4: Add space for each additional UTC.

1.4.2. Vehicle Operations Administration:

VEHICLE OPERATIONS ADMINISTRATION	SCOPE (SF)
Transportation Officer	120
Maintenance Supervisor (1 @ 85, 1 @ 50)	135
Maintenance Control (2 @ 85, 6 @ 50)	470
Administration Area	100
Break Area	200
Conference/Classroom	400
Vehicle Operations	320
Communications/Electrical	50
Subtotal	1,800
Overhead (30%)	540
TOTAL	2,340

1.4.3. Vehicle Maintenance:

VEHICLE MAINTENANCE	SCOPE (SF)
Inspector's Office (1 @ 85, 1 @ 50)	135
Library/Tech Manual	100
Dynamometer	1,020
Alignment	540
Battery	145
Wheel and Tire	700
Tool Crib	375
Material Control/Bench Stock	300
Machine Shop	800
Maintenance Lift Bays (4 @ 510)	2,040
General Purpose Maintenance Bays (4 @ 510)	2,040
Wash rack	600
Drive Through Corridor	3,250
Communications/Electrical	360
Subtotal	12,410
Overhead (30%)	3,720
TOTAL	16,130

Note: Administrative space and break room are included in Vehicle Ops Administration. Vehicle Ops Administration and Vehicle Maintenance Shop should be constructed together in one facility.

1.4.4. Refueler Vehicle Maintenance:

REFUELER VEHICLE MAINTENANCE	SCOPE (SF)
Main Service Bay (29 ft x 68 ft), based on R-11	1,980
Shower/Restroom	200
Subtotal	2,180
Overhead (15%)	330
TOTAL	2,510

1.4.5. Enclosed Vehicle Parking (Northern Tier):

ENCLOSED VEHICLE PARKING (Northern Tier)	SCOPE (SF)
Heated	6,000
Unheated	6,000

1.4.6. Traffic Management Office (TMO):

TRAFFIC MANAGEMENT OFFICE (TMO)	SCOPE (SF)
Packing and Crating	2,600
TMO Administrative Space	550

Note: TMO administrative space includes space for three full time and nine reservists, record files and computer systems.

1.4.7. Hazardous Storage (Pharmacy):

HAZARDOUS STORAGE (Pharmacy)	SCOPE (SF)
Administration (2 @ 85, 1 @ 50 for computer)	220
Customer Service Counter	80
Storage	2,200
Communications/Electrical	80
Subtotal	2,580
Overhead (30%)	770
TOTAL	3,350

Note: Storage includes space for eye wash shower, refrigerator, and flammable storage area (50 square feet (SF)).

Chapter 2

CATEGORY GROUP 11, AIRFIELD PAVEMENTS

2.1. General Criteria. Requirements for items in this group for AFRC units are determined in the same manner as for active units when located at Air Force installations. Adherence to these requirements at other locations may not always be possible due to multiplicity of situations under which AFRC operates. Federal Aviation Administration (FAA) airfield criteria is normally used for construction of runways, taxiways and associated work located on civil airports. Use naval airfield criteria for construction of airfield facilities located at Naval Air Stations.

2.2. Civil Airport Criteria. Criteria is detailed in AFH 32-1084.

2.3. Basic Item 111-111, Runway. Use active force criteria for runway length and other design elements. Limit runway width to 150 feet. Determine minimum runway lengths by operating function based on type of aircraft, weather conditions, and mission requirements.

2.4. Basic Item 111-115, Paved Overrun. Use AFH 32-1084 criteria.

2.5. Basic Item 112-211, Taxiway. Use active force criteria. Provide 50 feet minimum width taxiway for normal use and 40 feet maximum width for taxiways used only by towed aircraft.

2.6. Basic Item 113-321, Apron. Follow active force criteria. Omit apron space for transient aircraft unless an exception is approved by HQ AFRC.

Chapter 3

CATEGORY GROUP 12, PETROLEUM DISPENSING AND OPERATING FACILITIES

3.1. Basic Item 121-111, Petroleum Operations Building. A petroleum operations building is required to provide centralized facility for administering all base functions related to the receipt, storage, and issue of petroleum products and, when required, liquid oxygen and nitrogen (LOX and LIN). It also provides space for laboratory where prescribed tests must be made to assure that quality fuel is issued to all aircraft. Space allowances are as follows:

PETROL OPERATIONS BUILDING FUNCTION	SCOPE (SF)
Vehicle Checkpoint Building (Detached)	100
Lab	250
Ready Room/Classroom	550
Dispatch/Control	150
Administration	250
Locker/Latrine/Showers	300
Circulation and Misc	200
FMO Office	100
Communications/Electrical	60
Subtotal	1,960
Overhead (30%)	590
TOTAL	2,550

3.2. Basic Item 121-122, Hydrant Refueling System. Justify hydrant refueling systems on a case-by-case basis for strategic and tanker aircraft. Where hydrant systems are justified, provide a fueling position for no more than one each for every two aircraft parking positions.

3.3.   Basic Item 123-335, Vehicle Fueling System. Provide two duel outlet dispensing pedestals for ground fuels for each increment of 150 motor vehicles to be served. Provide at least one pedestal for mogas and the other for diesel. Provide storage in above ground tanks.

 3.4. Basic Item 124-135, Jet Fuel Operating Storage. Provide combined storage requirements for both operating and bulk storage based on the requirements of the assigned weapon system. Combined operating and bulk storage not to exceed the following quantities:

AIRCRAFT	QUANTITY (BL)
Fighter	5,000
C-130	5,000
C-141/KC-135	20,000
C-5	20,000

Note: Additional tankage may be justified based on PAA, tenant support, and contingency requirements for the installation. Provide a minimum of two cone roof storage tanks.

Chapter 4

CATEGORY GROUP 13, COMMUNICATION, NAVIGATIONAL AIDS, AIR TRAFFIC CONTROL, AND AIRFIELD LIGHTING

4.1. General Criteria. At AFRC owned locations, AFRC is responsible for air traffic control, air navigation facilities, Meteorological and Navigational Aids (METNAV) facilities and equipment, and airfield lighting. At joint use facilities, AFRC is responsible for these functions and facilities as per the Joint Use Agreement. AFRC responsibility will include, but is not limited to financial responsibility for operating and/or maintaining permanently installed NAVAID systems such as control towers, radar facilities ground controlled approach (GCA), radar approach control (RAPCON), instrument landing system (ILS), VHF omnidirectional range (VOR), tactical navigational aid (TACAN), airport surveillance radar (ASR), and precision approach radar (PAR) navigational aids. All facilities will meet standard requirements established in AFH 32-1084.

4.2. Special Criteria. Installation of ground-based aids to air traffic control, air navigation facilities, and airfield lighting at civil airports is normally accomplished by the FAA and airport authority. The FAA has the responsibility for and normally programs for these facilities.

4.3. Basic Item 131-111, Communications and Information Facility. This host base facility provides centrally located communications and information systems, both for intra-base and off-base communications. This facility normally includes a switchboard room, frame room, administration, radio maintenance and communication/crypto centers for base communications, information system flight, mission systems flight, plans and programming flight, and automated data processing (ADP)/network control center (NCC). Normal allowances are as follows:

COMMUNICATIONS and INFORMATION	
DESCRIPTION	**SCOPE (SF)**
Collocated Computer Room (ADP)/Network Control Center (NCC)	1,600
Classified Destruction	48
Communications Security Vault	400
Tape Library	140
Message Distribution Center	200
Communications and Information Manager/ Commander	150
Information Systems Flight Chief	120
Mission Systems Flight Chief	120
Plans and Programs Flight Chief	120
Base Radio Operations	200
Training	400
Administration	300
Base Telephone Switchboard	180
Comm - Computer Radio Maint	400
Comm - Computer Telephone Maintenance	400
Comm - Computer Maintenance Equipment Storage	150
Comm - Computer PC Maintenance	200
Storage & Supply Room	150
Production Control & Traffic Analysis (ADP)	180
Break Area	200
Comm - Audio Visual Maintenance	120

Base Test Facility	250
Switchboard Operator	144
ATCALS Maintenance	400
IM Personnel	700
Mail Room	360
Records Center Storage	200
Electronic Pubs/Forms/FOIA Reading Room	200
Reprographics Center	400
Graphics	180
Base Photo	220
Publications Distribution Office (PDO)	600
Communications/Electrical	280
Subtotal	9,710
Overhead (30%)	2,910
TOTAL	12,620

Chapter 5

CATEGORY GROUP 14, LAND AND OPERATIONAL FACILITIES

5.1. Basic Item 141-453, Base Operations. Include authorized space in 141-753, Squadron Operations. Scope of this facility will not exceed 1800 SF. If this facility is built separately, allow for mechanical room and toilet facilities (approximately 600 SF). There will be only one host operated base operations facility unless special circumstances exist.

5.2. Basic Item 141-753, Squadron Operations (includes Command Post, Base Operations and Aircraft Maintenance Unit {AMU}). Each flying squadron requires an operational facility for planning, briefing, administration, and critique of combat crews. Space for a USAF Command Post (category code 141-461) is included under the Wing (Section 6.3.1) and will not be duplicated in other facilities. Functions within this facility include weapons and tactics, intelligence, briefing/debriefing, standardization and evaluation, flight planning, flying safety, air advisor, flight records, physical training, life support, scheduling, general training, group or wing operations and space for unit administration. Additional space has been provided for storage of air crew chemical warfare ensemble in the personal equipment area.   Where the unit is host, add 1,800 SF for Base Operations (category-code 141-453). Aircraft Maintenance Unit (AMU) maintenance requirements are addressed under category-code 211-154 in Chapter 7.

5.2.1. Squadron Operations Facility. The following criteria is the normal allowance for each mission:

5.2.1.1. Squadron Operations Facility - Airlift.

DESCRIPTION	SQUAD OPS FUNCTION SCOPE (SF)						
	C-130	C-5	C-141	C-141 (AIRDROP)	SOS (HC/MC-130)	WEATHER (WC-130 /C-130)	ASSOC. AIRLIFT (Note 3)
Commander	140	140	140	140	140	140	140
Administration	140	140	140	140	140	140	140
Aircrew Briefing	1,100	1,500	1,400	1,500	1,100	1,100	1,400
Conference	250	250	250	250	350	250	250
Unit Administration	400	400	400	400	400	400	400
1st Sergeant	100	100	100	100	100	100	100
CAT Room	300	300	300	300	300	---	---
Intelligence	700	1,000	1,000	1,000	1,000	700	500
Ops Officer (O&T)	120	120	120	120	120	120	120
Records/ Data Management	120	120	120	120	120	120	120
Scheduling/Current Ops	200	500	500	500	200	200	200
Operations Center	200	200	200	200	200	200	200
Mission Planning	600	600	600	600	600	600	600
Tactics	250	250	250	250	250	250	150
Standard/Evaluation	300	300	300	300	700	300	300
Training	200	200	200	200	300	200	200
Testing	150	150	150	150	200	150	150
Operational Plans	400	100	100	100	400	400	---
Flight Engineers	300	450	450	450	300	300	450
Loadmasters	300	600	450	450	500	---	400
Navigator	300	---	---	300	500	300	300
Pilot	300	300	300	300	600	300	300
Chief Engineer	100	100	100	100	100	100	100
Chief Loadmaster	100	100	100	100	100	---	100
TALON I School (Instructors)	---	---	---	---	450	---	---
- Classroom	---	---	---	---	600	---	---
Mobility Storage	400	400	400	400	400	400	400
Chief EWOS	---	---	---	---	100	---	---
Chief Radio Operator	---	---	---	---	100	---	---
Chief Navigator	100	---	---	100	100	100	100
Chemical Training Ensemble Storage Note 2	400	400	400	400	400	400	---
- EWO	---	---	---	---	300	---	---
- Radio Operator	---	---	---	---	300	---	---
Chief Pilot	100	100	100	100	100	100	100
Life Support	4,000	5,000	5,000	6,000	6,000 Per squadron	4,000	Note 1
Aircrew Lounge	500	500	500	500	500	500	500
Computer Room/Training Rooms	800	800	800	800	800	800	500
Squadron Medical Element	---	---	---	---	200	---	---
Medical Storage	---	---	---	---	400	---	---
Quality	400	400	400	400	400	400	400
Crew Briefing	300	300	300	300	300	300	300
Locker Room/Shower	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Communications/ Electrical	460	510	500	550	640	440	300
Subtotal	15,730	17,530	17,270	18,820	22,010	15,010	10,420
Overhead (30%)	4,720	5,260	5,180	5,650	6,600	4,500	3,130
TOTAL	20,450	22,790	22,450	24,470	28,610	19,510	13,550

Notes:
1: Refer to AFH 32-1084, Table 5.6 for requirements to be added to the total.
2: This is an estimate only. Design to actual requirements based on actual number of ensembles. Estimate 3 SF per ensemble.
3: For C-17 see Section 5.2.1.2.

ADDITIONAL SQUADRONS: For each additional squadron, the following additives are applicable. Increases are only applicable for the specific functions listed below. Functions not specifically listed do not increase for additional squadrons.

DESCRIPTION	ADDITIVES FOR EACH ADDITIONAL SQUADRON						
	C-130 ARS	C-5	C-141	C-141 (AIRDROP)	SOS (HC/MC-130)	WEATHER (WC-130 /C-130)	ASSOC. AIRLIFT
Commander	140	140	140	140	140	140	140
Conference	250	250	250	250	350	250	250
Administration	70	70	70	70	70	70	70
Unit Administration	200	200	200	200	200	200	200
Intelligence	700	1,000	1,000	1,000	1,000	700	500
Ops Officer (O&T)	120	120	120	120	120	120	120
Records/ Data Management	60	60	60	60	60	60	60
Scheduling/Current Ops	100	250	250	250	100	100	100
Mission Planning	300	300	300	300	300	300	300
Tactics	250	250	250	250	250	250	150
Standard/ Evaluation	300	300	300	300	700	300	300
Testing	75	75	75	75	100	75	75
Flight Engineers	300	450	450	450	300	300	450
Loadmasters	300	600	450	450	500	---	400
Navigator	300	---	---	300	500	300	300
Pilot	300	300	300	300	600	300	300
Chief Engineer	100	100	100	100	100	100	100
Chief Loadmaster	100	100	100	100	100	---	100
Mobility Storage	400	400	400	400	400	400	400
Chief EWOS	---	---	---	---	100	---	---
Chief Radio Operator	---	---	---	---	100	---	---
Chief Navigator	100	---	---	100	100	100	100
Chemical Training Ensemble Storage Note 2	300	300	300	300	300	300	---
- EWO	---	---	---	---	300	---	---
- Radio Operator	---	---	---	---	300	---	---
Chief Pilot	100	100	100	100	100	100	100
Life Support	2,000	2,500	2,500	3,000	6,000	2,000	Note 1
Aircrew Lounge	250	250	250	250	250	250	250
Squadron Medical Element	---	---	---	---	200	---	---
Medical Storage	---	---	---	---	400	---	---
Quality	400	400	400	400	400	400	400
Crew Briefing	300	300	300	300	300	300	300
Locker/Shower	900	900	900	900	900	900	900
Communications/ Electrical	260	290	290	310	470	250	190
Subtotal	8,980	10,010	9,860	10,780	16,110	8,570	6,560
Overhead (30%)	2,690	3,000	2,690	3,230	4,830	2,570	1,970
TOTAL	11,670	13,010	12,820	14,010	20,940	11,140	8,530

Notes:
1: Refer to AFH 32-1084, Table 5.6 for requirements to be added to the total.

2: This is an estimate only. Design to actual requirements based on actual number of ensembles. Estimate 3 SF/PE.

5.2.1.2. Squadron Operations - C-17 Associate:

DESCRIPTION	SCOPE (SF)	
	1 Sq	4 Sq
Commander	140	560
First Sergeant	100	400
Conference	250	1,000
Squadron Administration	140	560
Executive Officer	100	400
Unit Admin/Orderly Room	400	1,600
ADO (O&T)	120	480
Records/Data Management	120	480
Tactics	170	680
Stan/Eval	300	800
Training	200	800
Chief Loadmaster	100	400
Loadmasters	400	1,600
Chief Pilot	100	400
Pilots	400	1,600
Crew Briefing/Debrief	300	1,000
Quality	400	800
Safety	100	400
Training Officer/NCO	100	400
Flight Commander's Office	150	600
Recycle/Shredder/Copier	100	400
Mission Planning/Tact/WX	250	1,000
Testing	150	500
Computer Training/CBT	350	1,200
Large Aircrew Briefing/Training	1,400	2,800
Projection Room	100	200
Aircrew Lounge	500	1,000
Mobility Storage	400	1,600
CWDE Training Ensemble	300	1,200
Locker Room/Showers	1,200	4,000
AFMSS	100	200
Fitness/Ergo Center	400	1,000
Intel and CIS	300	1,200
Pubs Room	100	200
Communications/Electrical	290	940
Subtotal	10,030	32,400
Overhead (30%)	2,920	9,440
TOTAL	12,950	41,840

5.2.1.3. Squadron Operations - Fighters:

DESCRIPTION	SCOPE (SF)	
	F-16	A-10
Aircrew Briefing	1,300	1,300
Mission Planning	600	600
Flight Management (Ops Office)	550	550
Chief Ops Plans	120	120
Operations/Plans Staff	550	550
Intelligence	800	800
Ops Training	700	700
Administration	120	120
Squadron Commander	140	140
Orderly Room	400	400
Standard/Evaluation	300	300
Flight Briefing Rooms (5)	700	700
1st Sgt	100	100
Quality	400	400
Storage (Mobility)	400	400
Operations Officer	140	140
EWO	100	---
Testing Room	100	100
Flight Commanders office (4@90)	360	360
Aircrew Lounge	500	500
Life Support/Storage/Egress Training	2,000	2,000
Simulator Training (MTT)	400	400
Weapons & Tactics	300	300
Physical Fitness Room	600	600
Men's Latrine/Showers/Lockers	700	700
Women's Latrines/Showers/Lockers	300	300
Communications/Electrical	380	380430
Subtotal	13,060	14,910
Overhead (30%)	3,920	3,890
TOTAL	16,980	16,850

5.2.1.4. Squadron Operations - Tankers:

DESCRIPTION	SCOPE (SF)			
	KC-135	KC-135 Add for 2nd Squadron	ASSOCIATE TANKER	ASSOCIATE TANKER Add for 2nd Squadron
Aircrew Briefing	1,000	---	1,000	---
Mission Planning/Flight Briefing	800	---	800	---
Flight Management (Ops Office)	300	---	300	---
Plans:	100	---	---	---
Briefing Room	500	---	---	---
Crew Study Area	400	---	400	---
Aircrew Communications	300	---	---	---
Intelligence	500	---	500	---
Tactics	250	---	150	---
Computer/Chart Storage	250	---	250	---
Equipment Storage	140	---	140	---
Equipment Room	500	---	---	---
Administration	120	---	---	---
Training	120	---	---	---
CAT Room	500	---	---	---
Quality	400	---	---	---
Mobility Storage	400	400	400	400
Administration	120	120	120	120
Active Duty Advisor	100	---	---	---
Squadron Commander	140	140	140	140
Operations Officer (O&T)	120	120	120	120
Orderly Room	400	200	400	200
Standard/Evaluation	300	300	300	300
Testing Room	100	100	100	100
Scheduling/Current Operations	600	300	600	300
Chief Navigator Office	100	100	100	100
Navigator Section	300	300	300	300
Chief Boom Operator Office	100	100	100	100
Boom Operator Training	800	800	800	800
Training Office	120	---	120	---
Computer Room (Training Rooms)	400	---	400	---
Aircrew Lounge	400	200	400	200
Pilot Training	500	500	500	500
Chief Pilot	100	100	100	100
Life Support Shop/Storage	4,000	2,000	Note 1	Note 1
Locker Room/Shower	1,200	900	1,200	900
Communications/Electrical	490	200	290	140
Subtotal	16,970	6,880	10,030	4,820
Overhead (30%)	5,090	2,060	3,010	1,450
TOTAL	22,060	8,940	13,040	6,270

Note: Refer to AFH 32-1084, Table 5.5b for requirements to add to total.

5.2.1.5. Squadron Operations - Air Rescue Squadrons (ARS):

DESCRIPTION	SCOPE (SF)
Command Section (C-130)	
- Commander	140
- Administration	140
- Unit Administration/Orderly Room	400
- First Sergeant	100
- Conference Room	250
Command Section (H-60)	
- Commander	140
- Administration	140
- Unit Administration/Orderly Room	400
- First Sergeant	100
- Conference Room	250
Standard/Evaluation	300
Intelligence	1,200
Operations (DO)	120
- Operations Resource Management	120
- Scheduling	150
- Current Operations	150
- Weapons/Tactics	250
- Mission Planning (space)	400
- Supervisor of Flying (SOF, space)	150
- Training	120
Operations Officer	150
Aircrew	
- Airborne Communications	300
- Flight Engineers	400
- Loadmasters	300
- Navigators	300
- Pilots	600
Life Support	4,000
Medical Element	500
Support Facilities	
- Aircrew Briefing	1,100
- Aircrew Lounge	500
- Briefing Rooms	600
- Chemical Training Ensemble Storage	800
- Men's Lockers	1,200
- Women's Lockers	300
Communications/Electrical	480
Subtotal	16,550
Overhead (30%)	4,970
TOTAL	21,520

Note: The table above is for two squadrons. If only one squadron, delete appropriate command section and reduce other elements as required.

5.2.1.6. Pararescue Operations:

DESCRIPTION	SCOPE (SF)
NCOIC	140
Superintendent	120
Administration	380
Operations Management	330
Logistics Management	300
Tactics/Mission Planning	400
Classroom	800
Dining/Kitchen/Break	280
Medical Training Support Equipment	180
Controlled Substance Storage/Med Ofc	230
Medical Supplies	400
Supplies Storage/Supply Office	1,000
Individual Equipment Storage	1,800
Alert Equipment Storage	800
Equipment Staging/Mission Build-Up	600
Parachute Storage (with space savers)	400
Scuba Equipment Storage/Wash Room	400
Drying Room	500
Locker Room/Shower	900
Zodiac Rack (2 @ 20x8)	400
ISU-90 Storage (7 @ 8x6)	400
Communications/Electrical	320
Subtotal	11,080
Overhead (30%)	3,320
TOTAL	14,400

Note: Provide 2000 SF covered storage, attached to facility with access from the covered storage into facility. Covered storage must be secured with fence up to roof.

5.2.1.7. Tanker/Airlift Control Flight (ALCF). Units assigned an ALCF will be the following requirements:

DESCRIPTION	SCOPE (SF)
Commander	140
Superintendent	100
Administration	1,530
Classroom	600
Communications Work Area/Storage	200
Mobility Storage	120
High Bay Pallet Storage	2,500
Vehicle Garage	1,400
Communications/Electrical	140
Subtotal	6,790
Overhead (30%)	2,040
TOTAL	8,830

5.2.1.8. AFRC Base Operations. Where AFRC is host, add 1,800 SF for Base Operations (category-code 141-453).

Chapter 6

CATEGORY GROUP 17, TRAINING FACILITIES

6.1. Basic Item 171-443, Reserves Forces General Training Support. The facility supports various AFRC non-flying units including, but not limited to, Medical Service Squadrons, Aeromedical Patient Staging Squadrons, Combat Logistics Support Squadrons, Communications Flights, and Security Police Flights. The space includes office and administrative areas, administrative support space, classrooms, and lockers. Determine additional space requirements separately for mobility equipment storage, training mockups, work areas, or other requirements unique to a particular unit. Unit requirements are as follows:

6.1.1. Combat Logistic Support Squadrons:

DESCRIPTION	SCOPE (SF)
Commander	140
Logistic Plans Program Officer	120
Supply Officer	100
First Sergeant	120
Maintenance Staff Officer	100
Aircraft Manager	100
Maintenance Repair Manager	100
Aeronautical Engineer	100
Aerospace Propulsion Support	100
Administrative Support (Open Offices)	2,000
Conference Room	250
Training Rooms (1 @ 300 SF ea, see Note 1)	300
Team Kit Storage (Per ABDR Team) 14 @ 30 sf ea (Note 2)	420
Pallet Generation	250
Netting Storage	60
Parts Storage	200
Word Bench	80
CLSS Supply Manager	100
Communications/Electrical	140
Subtotal	4,780
Overhead (30%)	1,430
TOTAL	6,210

Notes:
1: One training room per 4 Aircraft Teams-4 maximum.
2: Based on 14 teams. Size facility according to actual number of teams.

6.1.2. Communication Units. Requirements are as follows:

DESCRIPTION	SCOPE (SF)
Commander	120
Air Reserve Technician	100
First Sergeant	100
Administrative	250
Radio Operations	300
Data Operations	400
Maintenance	600
Maintenance Storage	400
Classroom	250
Communications/Electrical	80
Subtotal	2,600
Overhead (30%)	780
TOTAL	3,380

Note: For Combat Communications for AFSOC, see Paragraph 6.3.1, under OSS.

6.1.3. Security Forces Squadron at Tenant Bases. Applies to squadrons at all tenant locations.

DESCRIPTION	SCOPE (SF)
Commander	120
First Sergeant	100
Superintendent	100
Unit Administration	300
Training NCO, EST Mgr, Asst Instructor	250
Squad Leaders	250
Fire Team Leaders (3 @ 85 SF)	255
Quality Control, 100 SF test + 2 @ 85 SF	270
Unit ART and Jr ART	200
Mobility/Supply NCOs + 2 assistants	200
Classroom (Dividable)	900
Central Security Control/LED/BDOC Tng	100
Mobility/Supply Storage (Note 1)	2,500
Unit Learning Center	150
Career Adviser/Safety/Historian/DP	100
Break Room	150
Men's Locker/Shower	300
Women's Locker/Shower	120
General Storage	150
Communications/Electrical	200
Subtotal	6,720
Overhead (30%)	2,020
TOTAL	8,740

Note: Add space for each additional UTC.

6.1.3.1. Combat Arms Training:

DESCRIPTION	SCOPE (SF)
NCOIC	100
Administration, 12 @ 75 SF	900
Classroom (Dividable)	900
General Storage	80
FATS Simulator Bays, 3 @ 875 SF	2,625
Weapons Vault	150
Weapons Cleaning/Degreasing (Note 1)	250
Weapons Maintenance	200
Break Room	150
Men's Locker/Shower	175
Women's Locker/Shower	100
Communications/Electrical	170
Subtotal	5,900
Overhead (30%)	1,770
TOTAL	7,670

Note: Add 12 SF for each firing lane over 21 firing lanes.

6.1.4. Civil Engineer Squadrons (Tenant). Civil engineer squadrons that are tenants on active force locations require the following training/administrative space:

CIVIL ENGINEER SQUADRONS	
DESCRIPTION	SCOPE (SF)
Commander	140
First Sergeant	100
Orderly Room	220
ART	200
Career Advisor	100
Training/Test Room/CERTEST	150
Conference Room	250
Operations Officer	120
Superintendents (5@ 100 SF ea) See Note 1	500
Officer Work Area	200
Shop Foremen (4 @ 40 ea) See Note 1	160
Engineering Assistant, Supervisor, Drafting, Map Cabinets	500
Production Control, Scheduling, Mobility Control Center	500
Supply Room	280
Storage/Non Standard Mobility	2,000
Mobility Pallets, Storage/Build-up	2,000
Chief (Superintendent)	100
Classrooms (3@150)	750
Communications/Electrical	250
Subtotal	8,520
Overhead (30%)	2,560
Total	11,080

Notes:
1: Adjust totals for actual quantity of Superintendents and Shop Foremen.
2: Functionally, Disaster Preparedness is part of the Civil Engineering squadron. See Paragraph 6.2 for space requirements for Disaster Preparedness.
3: Functionally, Explosive Ordinance Disposal (EOD) is part of the Civil Engineering squadron. Space for them is provided by the Active Duty host in the host EOD facility.

6.1.5. Civil Engineer Squadrons (AFRC Host Base). Civil engineer squadrons that are located on bases where AFRC is the host require the following dedicated training/administrative/storage space. It is best if this space is integrated within the Civil Engineering Complex.

CIVIL ENGINEER SQUADRONS	
DESCRIPTION	**SCOPE (SF)**
Commander	140
First Sergeant	100
Orderly Room	220
ART (2 @ 85)	170
Career Advisor	85
Training/Test Room/CERTS	150
Classrooms (3@250)	750
Space for Reservists (18 @ 50) Historian, Safety, Supply, Ops (2), Readiness, Fire Dept, Trans, Eng, Tng, Self Insp, Draft, Officers (6)	900
Superintendents (5 @ 100 SF)	500
Mobility Storage (Note 1)	3,000
Home Station Equipment Storage	1,200
Communications/Electrical	220
Subtotal	7,440
Overhead (30%)	2,230
Total	9,670

Note: In addition, provide 800 SF of covered storage.

6.1.6. Firefighters. Reserve firefighters are to be located in a separate annex to the host fire station.   The annex should be located off to the side of the fire station with an outside entrance It should not be located in the middle of the host operation so that the host is required to use the reserve space as access to other host space. The space criteria below is also found in the *USAF Fire Station Design Guide* which also has a suggested layout.

RESERVE FIREFIGHTERS	
	SCOPE (NET SF)
Administration (See Note 1)	230
Equipment Storage/ Maint Room (See Note 2)	300
Lockers/Protective Clothing Area (See Note 3)	230
Certification/Testing Room (See Note 2)	150

Notes:
1: Increase by 100 SF for each additional 12 authorizations above 24.
2: Increase by 50 SF for each additional 12 authorizations above 24.
3: Increase by 8 SF for each authorization above 24.

6.1.7. Explosive Ordnance Disposal (EOD) Facility. Normally part of Civil Engineering squadron. Requirements for tenant units include administrative office, storage space for special purpose clothing and equipment and mobility bags. Must have access to work areas and classrooms. In addition to the above space, a stand alone unit requires space for vehicles, pallets, and a classroom.

EOD	Tenant	**Stand-Alone**

	SCOPE (NET SF)	SCOPE (NET SF)
Administration	380	380
Storage for mobility bags	510	510
Equipment Storage/ Pallets	1,000	1,000
Classroom	---	375
Net Total	1,890	2,265
Communications/Electrical	---	70
Subtotal	---	2,340
Overhead (30%)	---	700
TOTAL		3,040

6.2. Basic Item 610-913, Disaster Preparedness.   At AFRC bases, space for administrative area, classroom, storage and toilet facilities are typically located with the Civil Engineering Squadron.

DESCRIPTION	SCOPE	SCOPE
	LEAD TEAM	FOLLOW TEAM
Air Base Operability (ABO) Flight Chief	100	100
ART/DP Tech	85	85
Administration (at 50 SF per reservist)	150	50
Administration Storage	150	150
Equipment Manager	100	100
Mobility Storage	400	400
Non-standard Mobility	400	300
Classroom (40 person)	1,000	1,000
Equipment Storage	140	140

6.3. Basic Item 171-445, Reserve Forces Operational Training. The facility includes wing and/or group staff functions (that is, Administrative, Public Affairs, Chaplain, etc.)

6.3.1. Wings/Groups. Functions for Reserve wings/groups varies from mission to mission. Use the following table to total the elements for a particular facility:

DESCRIPTION	SCOPE (SF)	
	Tenant Unit	AFRC Base
Wing/Group Commander	300	300
- Wing/Group Administration	200	200
- Executive Officer	100	100
- Conference	650	650
- Quality	200	200
- Vice Commander	120	120
- Plans	730	730
- Command Post	1,900	1,900
- Active Duty Advisor	100	100
- Senior Enlisted Advisor	100	100
- Historian (includes storage)	200	200
- Safety (Based on 7-person office)		
-- Chief (Lt Col ART)	120	120
-- Craftsman (ART)	85	85
-- Storage	100	100
-- Reservists (5 @ 50)	250	250
- Public Affairs		
-- Chief	120	120
-- Administration (1 @ 85, 7 @ 50)	435	435
-- Storage	85	85
- Judge Advocate		
-- Judge Advocate (Active Duty)		140
-- Administration		100
-- Lawyers (2 @ 120)	240	240
-- Paralegal (2 @85)	170	170
-- Library/Waiting	200	200
- Social Actions	250	250
- Chaplain (See Note 4 below)	120	120
-- Waiting/Administration	130	130
- Contracting (See Note 5 below)		
-- Division Chief		120
-- Administration (2 @ 85)		170
-- Contracting Officer Supervisor		100
-- Contracting Officer (3 @ 85)		255
-- BCAS Operator		85
-- BCAS System		120
-- Conference Room		300
-- Administration Storage		100
- Civilian Personnel		
-- Chief		120
-- Specialist (2 @ 100)		200
-- Systems Administration		85
-- Administration Support		85
-- Server Room		80
-- Waiting Area/Guest PC		200
-- Administration File Storage/Copier		100
- Financial Management/Budget Advisor		
-- Chief	120	120
-- Finance Officer		100
-- Management Analyst (100 SF per person)	200	100
-- Budget Analyst (85 SF per person)	255	
-- Budget Officer		100
-- Administration (12 @ 85)		1,020
-- Reservist (18 @ 30)		540
-- Administration Storage	100	100
-- Files	100	100
-- Computer Server Room	50	50
-- Conference Room		200

- Customer Service	100	200
- Computer Area	200	200
OPERATIONS GROUP		
- Commander	140	140
- Administration	220	220
- Deputy Commanders	200	200
- 1st Sergeant		100
- Executive	100	100
OPERATIONS SUPPORT SQUADRON/FLIGHT		
- Commander	120	120
- Administration	100	100
- Audio/Visual	600	600
- Weapons/Tactics/Training	200	200
- Intelligence (OIC, clerk for wing)	200	200
- Life Support	200	200
- SORTS	100	100
- A-Forms	150	150
SUPPORT GROUP		
- Commander	140	140
- Deputy Commander	100	100
- Executive	100	100
- Administration	140	140
- 1st Sergeant		100
- Information Systems Flight (See Note 6 below)		
-- Chief	120	
-- Administration (5 @ 85)	425	
-- Reservists (3 @ 50)	150	
-- Mail Room	150	
-- Training	400	
-- Administration Storage	100	
- Message Center	100	
MISSION SUPPORT SQUADRON		
- Commander	140	140
- Administration/Orderly Room	400	400
- 1st Sergeant		100
- Services		
-- Chief	120	120
-- Commander	120	120
-- Superintendent (ART)	85	85
-- Administration (Civilian)		85
-- Administration (Reservist, 2 @ 50)	100	100
-- First Sergeant		100
-- Marketing (1 @ 85)		85
-- SORTS (2 @ 50)		100
-- RIBS (OIC)	85	85
-- RIBS (NCOIC)	85	85
-- Classroom	400	400
-- Administration Storage	100	100
-- Equipment Storage (See Paragraph 9.3.1.2)		
- Family Readiness		
-- Chief	120	120
-- Resource Room	85	280
-- Administration (4 @ 50)		200
-- Play Area		80
-- Waiting Area	100	100
-- File/Periodical/Storage		200
-- Kitchenette		120
MILITARY PERSONNEL FLIGHT (See Note 7)		
- Commander	140	140
- MPF Superintendent	100	100
- Administration	100	100
- Customer Service		
-- Customer Service Area	450	450
-- ID Cards	80	80
-- Waiting Area	120	120

-- Records Check	80	80
- Career Enhancement	300	300
- Personnel Employment	250	250
- Personnel Relocations	200	200
- Education and Training		
-- Chief	120	120
-- Administration Support	370	370
-- Counseling	100	100
-- Testing and Training	600	600
- Personnel Systems	150	150
-- Storage	100	100
- Personnel Readiness	150	150
- Casualty Office (Air Force Regional Function, see Note 8 below)		
JOINT USE SPACE		
- T-NET	800	800
- Classrooms/Training	1,800	1,800
- Break Area	200	200
- Area for Recycle Containers	40	40
- Storage/File Storage	200	200
- Conference Room	250	250
- Storage (Includes LAN Storage)	400	400
- LAN	120	120
- LAN Central Equipment	150	150
Communications/Electrical	650	770
Subtotal	22,250	26,450
Overhead (30%)	6,680	7,940
TOTAL	28,930	34,390

Notes:

1: For functions not listed add 85 SF for each assigned full time person or 50 SF for each reservist. Add 30% overhead space to subtotal to determine total facility requirement.

2: Does not include space for the communications function. This is a separate category code and should be calculated separately.

3: Does not include space for Internal Defense Flight/Security Police.

4: This is space for one chaplain. For each additional chaplain assigned, add 100 SF (net). Each chaplain is authorized a private office for privileged communication.

5: This is space for an eight person contracting office. For each person above eight people, add 85 SF/person. For 14 or more persons, add 40 SF total for larger conference room.

6: Requirements for host base for this function are included under Basic Item 131-111.

7: This is space for a Military Personnel Flight (MPF) with 16 full time persons and 8 reservists. For larger MPFs, add 85 SF for each additional assigned full time person and 50 SF for each additional reservists. For 20 or more assigned full time persons, add 150 SF to the Customer Service Area.

8: Casualty Office is an Air Force regional function. Add 250 SF (net) for this function.

9: Combined plans authorizations are included in category code 141-753 (Chap. 5)

6.3.1.1. Combat Communications. Provide space as follows:

COMBAT COMMUNICATIONS	
	SCOPE (SF)
Commander	140
Conference Room	200
Command Staff Work Area	450

Administration	
Personnel	
Training	
Multipurpose Computer Workstation	
Testing Room	100
Administrative Storage Room	50
Operations Superintendent's Office	100
COMSEC Storage Room	150
Tactical Operations Room	100
Operations Work Area	450
Communications Operations	
Radio Operations	
Systems Control	
Multipurpose Computer Workstation	
Operations Storage Room	50
Chief of Maintenance Office	100
Job Control Room	150
Log Plans/Mobility Control Center	150
Maintenance Work Area	450
Radio Maintenance	
Communications Systems Maintenance	
Multipurpose Computer Workstation	
Maintenance Shop Bay	2,500
Test Equipment Room	200
Benchstock/Tool Room	200
Systems Maintenance Room	500
Classroom	500
Warehouse	2,900
Communications/Electrical	280
Subtotal	9,720
Overhead (30%)	2,920
TOTAL	12,640

6.3.1.2. Recruiters. Provide recruiters space under this category code according to the following:

RECRUITERS	
	SCOPE (SF)
Senior Recruiter	140
Administration	100
Recruiters (3 @ 120)	360
Waiting Area	200
Storage	120

Notes:

1: Add 120 SF for each additional recruiter.

2: Regional recruiter offices are authorized 300 SF meeting space.

6.3.1.3. Deployment Processing Facility. Deployment processing facilities are applicable to AFRC host installations. Not all AFRC bases are the same and each base develops it's own deployment process. This information is provided to ensure adequate space is identified and that computers, communications and connectivity are available for AFRC unit deployment processes. Existing facilities should be used or modified to meet these requirements. Dedicated space is not authorized. When the deployment control center (DCC) is not active the space will be used for other functions. Each AFRC installation will deploy personnel and cargo using the five automated Air Force standard systems for deployments, integrated deployment system (IDS). IDS incorporates logistics module (LOGMOD) for providing Load & Packing Lists to deploying

squadrons and Deployment Schedule of Events to monitor all deployments; the Cargo Movement & Operating System (CMOS) & computer aided load manifesting system (CALM) for the movement and tracking of Air Force assets; Manpower & Personnel (MANPER) system for processing personnel; and deployment management system (DeMS) to aid deploying squadrons in managing their assets and training. IDS uses an installation's local area network (LAN).   Basic "minimum" facility requirements are listed below.

6.3.1.3.1. Deployment Control Center (DCC). AFRC Host Base requirements. Deployment command and control for the Wing Commander is monitored from this room. This room requires "controlled access," and must be capable of operating in classified mode in support of classified AUTODIN, Global Command and Control System (GCCS), and operations plan (OPlan) directives. Normal manning of the DCC is two representatives from the Plans (XP) office (Installation Deployment Officer and Logistics Plans representative); two Logistics Group representatives (LGS and LGT); a Military Personnel Flight representative; an administrative representative; and representatives from the largest deploying squadrons and tenant units (minimum manning eight, maximum depends on the number of deployment tasked units but could exceed 20). A GCCS terminal and STUIII must be in the DCC or readily accessible to DCC personnel in the immediate area. A minimum of five desktop computers and workstations with LAN connectivity is required. The ideal location of the DCC is in the same building or near the personnel and cargo deployment functions and personnel processing facilities.   All deployment facilities must be heated, air-conditioned, and lighted as well as normal offices. Automatic switching backup power generation is authorized, and back-up facilities should be identified in case fire, natural disaster, terrorist activity, or other event renders the primary facilities unusable. The DCC may be collocated with the Wing XP office:

6.3.1.3.1.1. A Conference/Briefing room is required for the deployment concept briefing.   This room may be one normally used for other purposes, such as a deployment training classroom personnel deployment function (PDF) passenger briefing room. The concept briefing room ideally is within the same building as the DCC.

6.3.1.3.1.2. The load planning function must be adjacent to or in the immediate proximity of the DCC. It should accommodate at least two people and two computers connected to the LAN. It should be a quiet and secure area.

6.3.1.3.1.3. The quality control function must be adjacent to or in the immediate proximity of the DCC. It should accommodate at least four people and two computers connected to the LAN. It should be a quiet and secure area.

6.3.1.3.2. Personnel Deployment Function (PDF). The PDF office is usually manned by two to four people, must have LAN connectivity, and must include a copier unless a suitable one is available nearby. The PDF continuously monitors deploying personnel requirements and publishes deployment orders. The PDF must be located in immediate proximity to the Personnel Readiness Unit (PRU) and personnel processing facility:

6.3.1.3.2.1. Personnel Processing Facilities. This facility requires a personnel processing line consisting of eight stations, each manned by 1-2 people behind tables, in booths, or in cubicles; a private area for counseling and administering injections in the hip (for the legal, chaplain, and medical stations); an indoor holding/briefing area at the beginning of the line for 100 people (seating desired); at least two rooms to brief passengers after processing for deployment, and "hold" them until they board transportation (should hold at least 100 people and provide comfortable seating). These rooms at the end of the personnel processing line must allow PDF personnel to control entry and exit, to maintain the integrity of the deploying force; should include a projection screen or large screen TVs to provide training or entertainment (cable TV desired) to the deploying personnel; must be near well-stocked vending machines, water fountain, and restrooms. The holding/briefing rooms may be used for other functions during normal operations, such as deployment and other training; meetings; and may be used for the deployment concept briefing.   Adjacent to or in the proximity of the DCC and PDF/PRU is the preferred location of the personnel processing facilities.

6.3.1.3.3 Cargo Deployment Function (CDF). This function is usually located on or near the cargo marshaling area. It is the installation's focal point for all cargo processing activities. LAN connectivity is required in this area. This area should provide enough room to check and process all accompanying cargo documentation.   It also dispatches cargo load teams to load and unload support aircraft. Normal CDF operations (cargo in-check, marshaling, and loading) can be done outdoors (ramp, apron, etc.) or in designated hangar space. The unit Base Deployment Plan should specify procedures for this process.

6.3.1.3.4. Deployment Training Classrooms. At least two rooms conducive to training at least 20 people at a time are required, using standard audio-visual equipment. Passenger holding/briefing rooms and the room used for the deployment concept briefing may be ideal for this purpose. The IDO, MPF, and CDF must provide various initial and recurring courses to unit deployment managers, CDF augmentees, and deploying personnel. These rooms may also be used for meetings, conferences, and other base meetings. Ten LAN drops and computers are needed in at least one deployment training classroom for IDS training.

Deployment Processing Facilities	Scope (Net SF)
Deployment Control Center (DCC)	
- Deployment Control Center (13 @ 70 SF)	910
- Conference Room	250
- Load Planning (2 @ 70)	140
- Quality Control (QC) (4 @ 70)	280
- Administration	90
Personnel Deployment Function (PDF)	
- PDF Office (4 @ 70)	280
- Processing Line	335
- Holding Room (entry)	1000
- Holding/Briefing Rooms (exit)	1200
- Counseling/Medical Rooms	210
Cargo Deployment Function (CDF)	Use hangar or outdoors
CDF Office	100
Deployment Training Classroom	Use holding areas

Note:: The allocations above are net space, that is, they do not include space for utilities, restrooms, corridors, etc.

6.3.2. Wing/Group Structure for Air Rescue Squadrons:

O & T	Wing	Group
	SCOPE (SF)	**SCOPE (SF)**
Command Section		
- Wing Commander	300	200
- Vice Commander	120	120
- Executive Officer	100	100
- Senior enlisted Advisor	100	
- Administration	200	200
- Inspector General	170	
- Active Duty Advisor	100	100
- Conference Room	650	500
Orderly Room	400	300
Command Post/Rescue Operations Center	1,900	1,900
Plans	700	700
Financial Management	1,190	1,190
- Records Storage	200	200
- Customer Service	200	200
Chaplain (See Note 2)	250	250
Quality	200	150
Historian	200	
Judge Advocate	400	400
Public Affairs	400	400
Safety	425	425
Security Police	85	
Social Actions	250	250
Recruiters	725	400
Civilian Personnel	270	
Operations Group		
- Commander	140	
- Deputy Commander	100	
- Executive Officer	100	
- Administration	220	
Operations Support Flight		
- Commander	120	120
- Administration	100	100
- Weapons/Tactics/Training	200	200
- Intel	200	200
- Life Support	200	200
- SORTS	100	100

- A-Forms	150	150
- Audio/Visual	600	600
Support Group		
- Commander	140	140
- Vice Commander	100	
- Executive Officer	100	
- Administration	140	140
- Information Systems Flight		
- Chief	120	120
- Administration (85 SF per person)	425	425
- Reservists (50 SF per person)	150	150
- Mail Room	150	150
- Training	400	400
- Administrative Storage	100	100
- Message Center	100	100
Military Personnel Flight		
- Director	140	140
- Chief, Personnel Progress	100	100
- Personnel Utilization	250	250
- Quality Force	300	300
- Customer Assistance	750	750
- Career Advisor	250	250
- Personnel Systems Management	300	300
- Administration	150	150
- Chief, Career Prog	100	100
- Education and Training	1,000	1,000
Services		
- Chief	120	
- Commander	120	
- Superintendent (ART)	85	
- Administration (Civilian)	85	
- Administration (Reservist, 2 @ 50)	100	
- First Sergeant	100	
- Marketing (1 @ 85)	85	
- SORTS (2 @ 50)	100	
- RIBS (OIC)	85	
- RIBS (NCOIC)	85	
- Classroom	400	
- Administration Storage	100	
Family Readiness		
- Chief	120	120
- Resource Room	280	280
- Administration (4 @ 50)	200	200
- Play Area	80	80
- Waiting Area	100	100
- File/Periodical/Storage	100	100
- Kitchenette	120	120
LAN Management		
- LAN Manager	100	100
- LAN Equipment	150	150
- LAN Storage	100	100
Common Use Areas		
- T-Net	600	500
- Break Area	300	300
- Classroom/Training	1,800	1,200
- Copier/FAX	100	100
- Pubs/Forms Storage	150	150
- Master Library	120	
- Conference Room	250	250
- Storage	200	200
Communications/Electrical	700	460
Subtotal	24,070	15,830
Overhead (30%)	7,220	4,750
TOTAL	31,290	20,580

1: For functions not listed add 85 SF for each assigned full time person or 50 SF for each reservist. Add 30% overhead space to subtotal to determine total facility requirement.
2: This is space for one chaplain. For each additional chaplain assigned, add 100 SF (net). Each chaplain is authorized a private office for privileged communication.

6.4. Basic Item 171-447, Reserve Forces Communications-Electronics Training. AFRC communication flights use criteria in 171-443 (Paragraph 6.1.2).

6.5. Basic Item 171-449, Reserve Forces Aeromedical Evacuation Training Facility. This facility provides space for training and operations of aeromedical evacuation (AE) units.   Space allowances for an Aeromedical Evacuation Squadron is as follows:

DESCRIPTION	SCOPE (SF)
Commander	140
Conference Room	250
First Sergeant	100
Chief Nurse IMC	120
Inflight Medical Care NCOIC Nursing Office	400
Inflight Chiefs	200
Training Office	250
Administrative	450
Chief Operations	140
Secure Medical Supplies	80
Medical Equipment Storage	900
Medical Equip. Lab	500
Chemical Ensemble Storage	200
Unit Training Room (6@400)	2,400
Flying/Ground Training	300
Standardization/Evaluation	250
Stan/Eval Testing	100
Scheduling	300
Computers/Data processing	480
FCC	150
Radio Room	200
Mission Control	450
CPR Training	600
Staff Development	250
CDC Training	150
Medical Readiness and Intel/Mobility/DP/Ancillary Training	400
Communications/Electrical	290
Subtotal	10,050
30% Overhead	3,020
TOTAL	13,070

Note:

1: An additional 3,000 SF administrative and 7,500 SF storage space is authorized for AES (Squadron) with multiple UTC equipment taskings.
2: Multiply total requirement by 30% to determine overhead space.

6.6. Basic Item 171-450, Reserve Forces Medical Training and Administration Facility.
Medical units include Aeromedical Staging Squadrons (ASTS), Medical Squadrons (MDS), and Contingency Hospitals & Detachments (CH). While units differ in tasking, they share similar administrative and training space requirements. However, unit tasking and unit manning must be considered when calculating space requirements. The following allowances by function are authorized as justified by a unit's peace time and war time tasking:

6.6.1. Medical Unit (Located on active duty base):

Medical Unit (Located on active duty base)	MDS, CH ASTS (100 BED)	ASTS (250 BED)
DESCRIPTION	SCOPE (SF)	SCOPE (SF)
Commander	150	150
Executive	100	100
First Sergeant	100	100
ARTS/Administration	750	900
Career Advisor	100	100
Conference Room	200	300
Chief Nurse	100	100
Nursing Services Area	750	1,000
Training/Scheduling	150	150
Skills Laboratory (one per installation)	750	1,000
Medical/Dental Records	300	300
Physician Section	220	220
Medical Readiness Staff	150	200
Pharmacy Staff	200	250
Dental Administration	150	150
Optometry Administration	100	100
Logistics	200	300
Storage	500	500
Classrooms	1,100	1,400
Aeromedical Staging Facility (Training)	500	500
OJT	300	300
Break Area	180	250
Communications/Electrical	210	250
Subtotal	7,260	8,620
Overhead (30%)	2,180	2,590
TOTAL	9,440	11,210

Note: If the unit is responsible for the aerospace medicine package (physical exam unit), then add 100 SF (net) for the Chief, Aeromedical Services and add 650 SF (net) for the Physical Exam Section.

6.6.2. Medical Unit (Not located on active duty base):

Medical Unit (Not located on active duty base)	MDS, CH ASTS (100 BED)	ASTS (250 BED)
DESCRIPTION	**SCOPE (SF)**	**SCOPE (SF)**
Commander's Office	150	150
Administration	400	400
First Sergeant	100	100
Chief Nurse	120	120
Off/Exam Rooms 8 @ 80	640	800
Immunizations	150	150
Trauma Treatment	300	300
EKG 2 @ 90	180	180
Medical Technical Station	110	110
Supplies	120	180
General Lab	120	120
Bio Lab	150	150
Skills Lab (one per installation)	700	850
Nursing services Area	700	850
Audio Exam	100	100
Optometry	120	120
Dental 2 @ 120	240	240
Eye Exam	100	100
Pharmacy	100	100
Dental Administration	120	120
Environmental Health	175	175
Training Officer	120	120
Classrooms	900	1,200
Patient Affairs	120	120
Vital Signs	200	200
Medical Staging	200	250
Radiology	100	100
Interview Rooms 2 @ 100	200	200
Medical Records	175	250
Conference Room	200	300
Waiting	600	800
X-Ray	275	275
Dark Room	60	60
Med Storage	60	60
Communications/Electrical	240	280
Subtotal	8,350	9,630
Overhead (30%)	2,510	2,890
TOTAL	10,860	12,520

Note:
1: Only one clinic per installation**.**
2: For AFRC bases with bioenvironmental engineering/military health responsibilities, the following requirements are applicable:

Administrative (Per Person)	85
Equip Calibration/Lab	200
Storage	50
Health Program Computers	100
Training/Interview Room	200

3: When this function is located in a stand alone facility, add 300 SF for overhead space.

6.7. Basic Item 171-873, Aerial Port Training Facility:

6.7.1. Facility Requirement. The facility provides for the administrative, classroom training, cargo and aerial delivery functions. An aerial port unit with C-130, C-141, C-17, C-5 and other similar aircraft requires approximately 12,700 SF in which to prepare loads for airdrop, store built up loads, pack cargo parachutes, and maintain airdrop supplies and equipment. Also required is an adjoining secure (fenced) parking area for assigned cargo handling equipment. The space required for an aerial port unit with aerial delivery tasking is as follows:

DESCRIPTION	SCOPE(SF)	REMARKS	COMPOSITE UNITS
Administrative:			
- Commander	140	Sole use space required	140
- 1st Sgt	100	Sole use space required	100
- Advisor (ART)	100	Sole use space required	100
- Orderly Room	300	Sole use space required	500
- Career Advisor	100	Sole use space required	100
- Supply	200	Sole use space required	200
- CW Storage	200	Mobility tasking only	400
Training:			
- Material Handling Equip.	200	Joint use space preferred	(NORTHERN TIER GARAGE) 1000
- Air Terminal Oper. Ctr.	200	Sole use space required	500
- Port Operations	200	Sole use space required	500
- Freight	200	Sole use space preferred	---
- Safety/Quality	200	Sole use space required	150
- Special Handling	200	Sole use space required	500
- Vehicle Maint.	200	Joint use space preferred	100
- Training Office	200	Joint use space preferred	200
- Classrooms	900	Joint use space preferred	800
Aerial Delivery Operations			
- Parachute Packing/Rigging	3,000	Joint use space preferred	3,000
- Build Up and Storage	3,500	Storage(approx 1,000 SF) - sole use Built Up Area - joint use preferred	10,000
- Equipment and Supplies	700	Sole use space required	700

Notes:
1: Add 30% overhead.
2: Composite Aerial Ports are those with both tactical and strategic tasking (mobility missions).

6.7.1.1. Space shown above as joint use is provided as sole use space only if host base facilities cannot be made available (requires base facility board certification), and then only to the extent approved by HQ AFRC.

6.7.1.2.   Aerial Port units without aerial delivery capability and Aerial Port Squadrons (APS) are authorized 4,500 SF for all training and administrative functions and use the host base air freight terminal for "hands on" training. Locations with two assigned units are authorized 6,000 SF and each additional unit are be authorized 3,000 SF. APS not collocated with an active duty freight terminal are authorized additional space for load build up and supply/equipment storage on a case by case basis.

6.8. Basic Item 171-875, Load Crew Training. Provide an area to accomplish training of armament crews on fighter aircraft. Usually accomplished on a parked aircraft in a hangar or on a ramp. When possible a dedicated dock should be provided. A total of 1,000 SF should be provided for office, load crew ready room and classroom.

Chapter 7

CATEGORY GROUP 21, MAINTENANCE FACILITIES

7.1. Basic Item 211-111, Hangar. Protected space for aircraft maintenance. Includes necessary utility systems. Whenever possible, a fully enclosed space is provided for accomplishing scheduled (isochronal/phase) maintenance on large and medium aircraft. The number of dock spaces to be provided can be determined by multiplying the number of primary assigned aircraft (PAA) by the following factor:

AIRCRAFT	FACTOR
A-10	0.25
C-5, C-141	0.16
C-130, KC-135	0.15
F-16	0.27
Helicopter	0.25
B-52	0.15

Formula: Number of aircraft by type x factor = Required covered spaces. Fuel maintenance corrosion control hangar (Cat. Code 211-179) is not included in this number. **Example:** 12 each C-130 x .15 = 1.8 or 2 covered spaces.

7.2. Basic Item 211-152, General Purpose Shops. Use following authorizations:

FUNCTION	SCOPE (SF)						
	A-10	F-16	C-130	KC-135	C-141	C-5	COMPOSITE
Electric, Environ. Battery	1,500	1,500	2,500	2,500	3,100	4,500	4,000
Machine	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Welding	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Sheet Metal	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Corrosion Control (Note 1)	2,000	2,000	2,000	2,000	2,500	2,500	2,500
Wheel & Tire/Repair & Reclamation	1,500	1,500	2,000	2,000	2,000	2,000	2,000
Hydraulic, Pneudraulic (Note 2)	1,000	1,000	1,500	1,500	1,700	2,000	1,500
Fiberglass, Composite Material	1,000	1,000	700	700	1,500	2,500	700
Egress	1,500	1,500	-	-	-	-	---
Admin/Tng/CTK	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Communications/Electrical	540	540	550	550	610	690	610
Subtotal	18,540	18,540	18,750	18,750	20,910	23,690	20,810
Overhead (20%)	3,710	3,710	3,750	3,750	4,180	4,740	4,160
TOTAL	22,250	22,250	22,500	22,500	25,090	28,430	24,970

Notes:
1: Units equipped with abrasive grid blast rooms are authorized additional space (900 SF for the larger unit and 640 SF for the small unit, gross square feet).
2: All units with refueling capability require additional space to service the refueler boom. This periodical task is normally accomplished in any open area (that is, engine shop aisle, support equipment shop, etc.); however, if no other area is available, an additional 260 SF (gross square feet) is authorized for the hydraulic shop.

7.3. Basic Item 211-153, Non-Destructive Inspection Shop. The facility provides space for field-level Non-Destructive Inspection of aircraft components. The process investigates the

quality, integrity, properties, and dimensions of materials and components without damaging or impairing their serviceability by use of optic, magnetic, eddy current, ultrasonic, radiographic, infrared, ultraviolet, and spectrometric devices. The spaces include: (Joint Oil Analysis Program), (JOAP) lab, x-ray room, film developing room, tool crib/parts storage, locker space, penetrant and magnetic particle lines, and office areas. A basic space allowance of 2,000 SF (add 600 SF for latrine and mechanical space if constructed separately) is required. If a NDI shop exists on a given base, joint use is required. Facility will not be duplicated.

7.4. Basic Item 211-154, Aircraft Organization Maintenance Shop (Aircraft Maintenance/ Aircraft Generating Units). Function is made up of the following functions:

7.4.1. Flightline. Areas are needed for supervisor and flight chief's office, break area, lockers, showers, bench stock, centralized tool kit (CTK) and technical orders (TO).

7.4.2. Inspection. Same as flight line except reduced break, locker, and shower areas.

7.4.3. Management. Requires offices for superintendent, first sergeant, career advisor, administrative and training offices.

7.4.4. Support Equipment. Requires an office for supervisor and shop/storage area for rails, seats, etc. and non-powered AGE.

7.4.5. Aircraft Maintenance Unit (AMU)/Aircraft Generation Squadron (AGS):

AMU/AGS	C-130	C-5	C-141	KC-135	Associate Tanker/Airlift
Maintenance Officer	120	120	120	120	120
Maintenance NCOIC	100	100	100	100	100
Maintenance Debrief	200	200	200	200	200
Flight Officers 2 @ 120	240	240	240	240	240
Conference Room (Briefing)	200	200	200	200	200
Maintenance Training Classroom 3 @ 125	375	375	375	375	375
Maintenance Administration	300	300	300	300	300
Tool Room/Bench Stock	800	1,200	1,000	800	500
Tail No. Bins	600	1,000	800	600	---
Tech Order Library	100	100	100	100	100
Ready Room	800	800	800	800	800
Production Supervisor	100	100	100	100	100
Production Scheduling	200	200	200	200	150
SUPPORT Equipment Maintenance	3,000	4,500	4,500	3,000	---
LOOSE-21 Equipment Storage	2,000	4,000	4,000	2,000	---
Squadron Commander	---	140	140	---	---
Superintendent	---	120	120	---	---
Administration	---	120	120	---	---

Note: Overhead not included.

7.4.5.1. Sortie Generation Flight. Associate tanker airlift.

SGF REQUIREMENTS FOR ASSOCIATE TANKER/AIRLIFT (PER SQUADRON)	
	SQUARE FEET

Maintenance Debrief	Joint use with Active Duty
Tool Room/Bench Stock	Joint use with Active Duty
Tech Order Library	Joint use with Active Duty
Ready Room	Joint use with Active Duty
Maint OIC	120
Maint NCOIC	100
Production Superintendent (2)	200
Conference Room	200
Training	200
Maintenance Administration	300
Storage	300
Total	1,420

Notes:
1: Space of Reserve AGS/SGF. The active duty adds dedicated space for the Reserve requirement in the active duty squadron operations/AMU. See AFH 32-1084, Table 5.5.
2: Space for Reserve Life Support. The active duty increases their life support space to accommodate reserve requirements. See AFH 32-1084, Table 5.5.
3: Overhead not included.

7.4.5.2. Aircraft Maintenance Unit (AMU). For fighters and rescue units.

AMU	A-10	F-16	(Rescue) C-130 & Helicopter	(Rescue) Helicopter
Maintenance Officer	120	120	120	120
Maintenance NCOIC	100	100	100	100
Maintenance Debrief	500	500	300	300
Flight Chiefs/Officers (includes Specialty/Weapons/PHASE	1,000	1,000	1,000	1,000
Conference Room (Briefing)	400	400	400	400
Maintenance Training Classroom 3 @ 200	600	600	600	600
Maintenance Administration	300	300	200	200
Tool Room/Bench Stock	---	---	400	400
Tail No. Bins	---	---	400	200
Tech Order Library	---	---	100	100
Ready Room	2,000	2,000	1,500	1,500
Dispatch	---	---	200	200
ABDR Training/Storage	600	600	---	---
Production/Supervisor	500	500	100	100
Plans, Scheduling	300	500	200	200
SUPPORT Equipment Maintenance (Tech Order Library/Tail No. Bins/Tool Room/Bench Stock)	4,000	4,000	3,200	3,200

*Note***:** Add 30% Overhead.

7.5. Basic Item 211-157, Aircraft Maintenance, Engine Inspection, and Repair Shop.
7.5.1. Functional Description. The engine inspection and repair (I&R) shop provides space for inspection, maintenance, and repair of aircraft engines, storage of spare engines, bearing and inspection shop, parts storage/tool crib, parts cleaning, propeller shop (if required) and office administration.

7.5.2. Additional Space Requirements. Additional space may be necessary to support activities such as CEMS/TEMS, spare engine storage, etc.

7.5.3. Engine I&R Requirements C-5/C-17:

ENGINE I & R REQUIREMENTS	ENGINE I&R SHOP	DEPOT/REGIONAL JEIM SHOP
C-5/C-17	SCOPE (SF)	SCOPE (SF)
- Spares Storage (Unheated)	3,000	14,000
- APU & Trailer	1,000	1,000
- CTK/Parts	1,000	1,000
- Work Station(s)	1,000	5,000
- Administration	570	800
- Break/Training/Dispatch	530	1,000
- Parts Cleaning	600	600
- Thrust Reversers	2,000	2,000
- Subtotal	9,700	25,400
- Overhead (15%)	1,460	3,810
TOTAL	**11,160**	**29,210**

7.5.3.1. Engine I&R, C-141B/KC-135:

C-141/KC-135		
Engine Shop	10,000	
Spares Storage (Unheated)	2,500	
Subtotal	12,500	
Overhead (15%)	1,880	
TOTAL	14,380	

7.5.3.2. Engine I&R, C-130:

C-130		
Engine Shop	9,000	
Spare Storage (Unheated)	1,400	
Prop Shop	2,400	
Subtotal	12,800	
Overhead (15%)	1,920	
TOTAL	14,720	

7.5.3.3. Engine I&R, A-10:

A-10 Aircraft		
Engine Shop	10,000	
Storage(Unheated)	2,500	
Subtotal	12,500	
Overhead (15%)	1,880	
TOTAL	**14,380**	

7.5.3.4. Engine I&R, F-16:

F-16 Aircraft		
Maintenance Bay	6,800	
Engine Storage (Unheated)	2,400	
Tool Crib	500	
Parts Cleaning Room	400	
Bearing & Inspection	200	
Administration	1,200	
Computer CAMS Room	300	
Locker Rooms, Toilets	600	
Mechanical	400	
Subtotal	12,800	
Overhead (15%)	1,920	
TOTAL	**14,720**	

7.6. Basic Item 211-179, Fuel Systems Maintenance Dock. The facility provides the area to perform maintenance on aircraft fuel systems (also may incorporate aircraft washing capabilities). Each operational location is authorized a fuels systems maintenance space.
Note:: Unless special facilities are available, AFRC units are not authorized any painting other than maintenance touch-up and then only to the extent authorized by the base environmental office.
*Note***:** F-16 only - Add 3,000 SF for tank build-up/training.

7.7. Basic Item 214-467, Refueler Vehicle Maintenance Shop:

7.7.1. Refueler Vehicle Maintenance Shop Space Requirement. Space for this function is normally provided by adding one bay to the automotive shop with a scope of 1,500 square feet (size of R-11 Refueler - 38' x 8.83'W x 8.5'H). This bay must be separated by a fire wall and be provided with a single overhead door, a forced ventilation/exhaust system, and an explosion proof electrical system.

Notes:
1: If facility is located separately, provide additional space for mechanical room.
2: For increased space requirements, use active force requirements.

7.8. Basic Item 215-552, Weapons Release and Gun Systems Shop. The facility provides space for performing maintenance on aircraft weapons release systems and associated equipment. In addition to normal shop space, the facility provides training space, office, bench stock/tool room, locker room, and weapons load storage space. Requirements follow below:

AIRCRAFT TYPE	SCOPE (SF)
A-10	11,300
F-16	12,700
HH-60G	1,700

Note: Includes Alternate Mission Equipment (AME) Storage. Allow 2,000 SF for F-16 and 1,000 SF for A-10 aircraft.

7.9. Basic Item 216-642, Munitions Maintenance, Training and Storage Facility. This facility is used to inspect, test, assemble, maintain and store missiles, munitions and munitions trailers. The facility includes missile maintenance bays, classroom, office, parts/tool storage, restrooms, locker space, trailer maintenance bay, paint spray room, covered storage, and igloos. Siting must comply with explosives safety quantity distance criteria. Fighter unit requirements:

FUNCTION BREAKDOWN	SCOPE (SF)
Administration Area:	
- Hallways	250
- Classroom	280
- OIC's Office	120
- NCOIC's Office	100
- Janitor's Closet	30
- Dispatch/Break Room	400
- Men's Toilet/Locker	375
- Women's Toilet/Locker	200
- Munitions Control/CAAS B	220
TOTAL	1,975
Maintenance Area:	
- Paint Bay	500
- Mechanical Room	300
- Missile Maintenance Bay 25x50	1,250
- Trailer Maintenance (Drive Thru) 30x50	1,500
- ALS/ULS Process/Inspect 20mm Munitions	600
- Practice Processing (BDU Process/Insp)	620
TOTAL	4,770
Munitions Storage Area:	
- 20mm Munitions Storage	600
- ALS/ULS Storage (Loaded Carts)	900
- Practice Storage (Built-Up BDUs)	620
- Combined Storage (1.3 & 1.4 Munitions	600
- WRM Munitions (Grenades, Flares, Mines, etc.)	900
TOTAL	3,620
Trailer Storage Area:	4,000
Missile Training Covered Storage:	1,000
RAMS Area (100' x 100' pad):	10,000

Notes:
1: Add a second Missile/Bomb Maintenance bay of 1,240 SF if unit is tasked with LGBs or Maverick Missile (TGM-65).
2: Add 1,500 SF (30'x50') if unit has a requirement for storage of WRM Live Missiles/All Up Rounds (AUR).
3: WRM munitions requires a multicube with at least 8 small bays to house different compatibility and user groups.
4: Missile maintenance bays are sized large enough for checkout and assembly of 2 different missile types in each bay (2 checkout lines) and includes a 40 SF for Rocket Motor Test Cell in

each bay (missile types include: AIM 7, AIM 9, or AMRAAM). Simultaneous checkout of 2 live missiles in the same bay is not permitted.

5: Trailer storage areas should be covered in cold climate areas.

6: Frequently these are separate buildings. Add 20% overhead to each building.

Munitions Definitions				
ALS	Ammunition Loading System		EOD	Explosive Ordinance Disposal
AUR	All-Up-Round		LGB	Laser Guided Bomb
BDU	Bomb Dummy Unit		ULS	Universal Loading System
WRM	War Ready Material			

7.10. Basic Item 217-712, Avionics Shop. The shop is used to perform maintenance on aircraft equipment and accessories such as airborne communications, cameras, bombing, navigation and fire control systems. The facility includes shop space, classroom, office, parts/tool storage, restrooms and locker room space. Electronic countermeasures (ECM) maintenance and storage may be added to this facility. See category code 217-713, ECM POD/STORAGE. Additional space may be authorized for special requirements unique to that mission. The following space requirements apply:

AIRCRAFT	SCOPE (SF)
F-16	11,000
A-10	7,570
C-130E/H (See note below table)	6,400
HC-130/MC-130	15,500
HC-130/HH-3(H-60)(ARS) See Note below table	6,400
KC-135	5,400
C-141	8,000
C-5	12,000

Note: Provide an additional 1,000 SF secure room for C-130 aircraft and 400 SF for H-60 Helicopters Equipped with Defensive Systems.

7.11. Basic Item 217-713, Electronic Countermeasures (ECM) Pod Shop/Storage Facility:

7.11.1. Functional Description. The facility supports ECM activities of specific fighter and special operations units such as A-10, F-16 and others. The facility contains maintenance space for ECM pods and radar warning receivers, storage space for pods, receivers and other needs, and administrative space. The function can be added to category code 217-712, Avionics Shop.

7.11.2. ECM/LANTIRN/LANA Pod Maintenance Shop/Storage Facility. The facility supports low altitude night attack (LANA) pod requirements of specific fighter units such as F-16. The facility contains maintenance and storage for LANA pods and associated equipment. The function can be added to category code 217-712, Avionics Shop. Required areas include the following:

AIRCRAFT	SCOPE (SF)
A-10	6,700
F-16A/B	6,700
F-16C/D (LANTIRN included)	8,700
HAC-130/MC-130	8,700

H-60	400

7.12. Basic Item 218-712, Aerospace Ground Equipment (AGE). The facility supports inspection, maintenance, repair, and servicing of all assigned aircraft support equipment (SE). It contains maintenance bays, tool crib, storage, battery shop, administrative area, paved equipment parking, and wash and paint bay. Only one AFRC owned paint spray bay/booth is authorized per base. Space requirements to support up to 75 pieces of AGE are:

FUNCTION	SCOPE (SF)
Maintenance Bays	2,500
Tool Crib	200
Parts Cleaning Room	200
Battery Room	100
Parts/Storage	400
Administration	200
Cams/Computer	100
Classroom/break Area	300
Overhead	1,000
TOTAL	5,000
EXTERIOR STORAGE	
Storage/Paved Parking	2,.250
Fuel Servicing/Tanks	750

Notes:

1: Units maintaining 76-120 pieces of powered AGE are authorized an additional 600 SF in both the maintenance shop area and the storage/paved parking area.

2: Units maintaining 121-160 pieces of powered AGE are authorized an additional 1200 SF in both the maintenance shop and the storage/paved parking area.

3: For units maintaining support equipment (non-powered AGE), add 3,200 SF. See category code 211-154.

4: Units located in northern climates can convert up to 25% of storage/paved parking area to enclosed heated storage when unit is located at installations that experience severe winters. For purposes of these criteria, severe winters are those with 30 or more days per year of -10 degrees Fahrenheit or lower, or with an average January daily temperature of +20 degrees Fahrenheit or lower as determined from two 10-year weather data base.

7.13. Basic Item 218-852, Survival Equipment Shop. Use active force criteria of 4,400 SF. Add 1,400 SF Crew Storage Space for HC-130/MC-130 units only.

7.14. Basic Item 219-944, Base Engineer Maintenance Shop:

7.14.1. Civil Engineer Administration and Maintenance Shop. Provides shop and administrative space necessary to support all host base maintenance functions performed by the base civil engineer as well as training space. Normal allowances are given below. Additional space may be provided for additional activities (that is, pavements and ground facility, (category code 219-943, etc.) where fully justified, using active force criteria.

DESCRIPTION	SCOPE (SF)
Administration:	
- Base Civil Engineer	140

- Industrial Engineer	85
- LAN/Systems Administrator	270
- Environmental (Ch 100, 5 @ 85, 70 stor)	595
- Engineering (Ch 100, 12 @ 85, 70 stor)	1190
- Financial Management (3 @ 85, 60 stor)	315
- Real Estate (1 @ 85, 60 stor	145
- Training Storage	60
- Drafting/CADD (2 @ 90)	180
- Reproduction/Plans Storage	400
- Break Room	300
- Conference Room	540
Subtotal	4,220
OPERATIONS AND MAINTENANCE:	
- Operations Chief	120
- Production Control (1 @ 85, 215 stor)	300
- Material Control (1 @ 85, 35 stor)	120
- Operations Chief	140
- Planning (2 @ 85)	170
Subtotal	850
WORK AREA and SHOP (See Note 1, 2):	
- Pest Management	2,000
- Roads and Grounds	2,800
- Refrigeration, HVAC, Liquid Fuels	1,300
- Sheet Metal	1,200
- Plumbing	500
- Welding Shop	500
- Paint	900
- Carpentry Shop	1,900
- Key Shop	120
- Sign Shop	360
- Power Production, Electric	1,100
Subtotal	12,680
STORAGE (See Note 2):	
- Warehouse	3,000
- Paint Storage	120
- Janitorial Supplies	300
Subtotal	3,420
SUBTOTAL	21,170
Communications/Electrical	640
SUBTOTAL	21,810
Overhead (30%)	6,540
TOTAL	28,350

Notes:
1: Includes space for four superintendents.
2: Individual shops and storage spaces utilized space saver equipment.

7.15. Basic Item 219-947, Base Engineer Storage Shed. This facility provides covered storage for items of equipment and supplies needed for installation operations and maintenance which do not require regular warehouse storage. A scope of 2,000 SF is authorized for USAFR host base civil engineer organizations.

Chapter 8

CATEGORY GROUP 42, EXPLOSIVES STORAGE

8.1. Basic Item 422-256, Rocket Storage and Assembly Building. This facility provides combined assembly shops and live ammunition storage. Requirements for AFRC units are included in 216-642.

8.2. Basic Item 422-257, Segregated Magazine. This magazine is used to store small quantities of many different types of explosives and ammunition. This requirement is included in 216-642.

8.3. Basic Item 422-258, Above Ground Magazine. This facility is used to store general munitions as authorized by AFR 127-100 and includes small arms ammunition without explosive projectiles, fuse lighters, distress signals, and 20mm/30mm ammunitions without explosive projectiles. This requirement is included in 216-642.

8.4. Basic Item 422-264, Storage Multicube. Facility is used to store flares, rockets, smoke grenades, and small arms ammunition. Any requirement for these facilities is determined by HQ AFRC on a case-by-case basis.

Chapter 9

CATEGORY GROUP 44 & 45 STORAGE FACILITIES - COVERED/OPEN, AND SPECIAL PURPOSE

9.1. Basic Item 442-257, Base Hazardous Storage/Hydrazine Storage and Servicing Facility:

9.1.1. Base Hazardous Storage (Pharmacy Program). Provides for the storage and dispensing of paints, oil, dope, chemicals, bottled gases, etc. as required at each host base (See Paragraph 1.2.5.7).

9.1.2. Hydrazine Storage and Servicing Facility. Provides space for servicing and storage of hydrazine fuel containers. HQ AFRC determines on a case-by-case basis whether to provide a full service facility or storage only.

9.2. Basic Item 442-258, Liquid Oxygen/Nitrogen Storage (LOX/LIN). A pad, cover, fencing and road access to provide protected storage for the authorized equipment storage tanks. Use AFH 32-1084 criteria.

9.3. Basic Item 442-758, Base Supply and Equipment Warehouse:

9.3.1. Warehouse Space. Warehouse space is required for bulk and bin storage of materials. This facility includes space for aisles, receiving, shipping, packing, crating, equipment storage and issue, central weapons storage, general supply and base issue/supply point, personnel clothing and equipment, latrines. utility room, administration, equipment management, and transportation management. Due to the various taskings of AFRC units, Use scope in this section for estimating purposes only. Establish actual requirements on a case-by-case basis in coordination with HQ AFRC.
Note: At tenant locations, this is a host function; however,. AFRC units have the following additional requirements:

9.3.1.1. Weapons Ready Storage Kits (WRSK):

WEAPON SYSTEM	SCOPE (SF)
Fighter	3,500
Tactical Airlift/Tanker	2,000
Strategic Airlift - note 1 below	3,500

Notes:
1: In addition to WRSK storage, an additional 3,500 SF is required.
2: At USAFR host locations, the following requirements apply: (Add the following)

9.3.1.2. Equipment Storage for Services:

HOME STATION TRAINING (HST)	SCOPE (SF)
R-1 Services Lead	200
R-2 Services Augmentation	200
R-3 Services Lead Management	150
R-4 Services Management Augmentation	150
R-5 Services Staff Augmentation	200
R-6 Services Port Mortuary Support	50
RZ Services In-Place UTC (Mortuary)	150
Supply	100
Mobility Storage (per person)	6

UTC TEAM KIT STORAGE	SCOPE (SF)
R-1 Services Lead	125
R-2 Services Augmentation	120
R-3 Services Lead Management	0
R-4 Services Management Augmentation	0
R-5 Services Staff Augmentation	125
R-6 Services Port Mortuary Support	100
RZ Services In-Place UTC (Mortuary)	0

Note: Outside storage required for Mobile Kitchen Trailer (MKT), minimum of 200 SF, 60 kw generator, minimum of 200 SF, fuel storage, minimum of 50 SF (at least 50 ft from buildings), MKT Supplies, 150 SF. Additional storage required (5 SF per person) for Mobility A-Bags and Mobility C-Bags, unless storage provided by Supply.

9.3.1.3. Base population (See note 2 below). Multiply base population by 15 SF.

9.3.1.4. Administrative Space. Multiply assigned personnel by 85 SF.

9.3.1.5. General/Storage Space.

WEAPON SYSTEM (Note 3 below)	SCOPE (SF) PER PAA
Fighter	500
Tactical Airlift/Tanker	700
Strategic Airlift	1,200

Notes:
1: Strategic airlift includes WRSK for assigned units only (that is, Aeromedical Evacuation Squadron).
2: Use base population of any given UTA weekend, not total assigned.
3: Use Primary Assigned Aircraft (PAA) only for space calculations.

9.3.3.5.1. Storage space for mobility bag storage shall be calculated per base requirements, at 6 SF per authorized mobility position. Determine space for other deployable mobility Equipment on a case-by-case basis.

Chapter 10

CATEGORY GROUP 61, ADMINISTRATION FACILITES

Overview: Administrative space requirements normally include private offices (supervisory), conference/training space, open office areas (staff), administrative support and required bathrooms, lockers, break areas, utility space, and receiving areas.

10.1. Basic Item 610-129, Weapons Systems Maintenance Management (LG/Logistics Support Squadron). Provides for offices for the chief of maintenance, classroom, maintenance control, plans, scheduling, documentation, material control, quality control, records and analysis and administration. Requirements:

LOGISTICS SUPPORT SQ	F-16	A-10	KC-135	C-130	C-141	C-5
LG	150	150	150	150	150	150
Administration	100	100	100	100	100	100
Commander	140	140	140	140	140	140
Deputy Commander	100	100	100	100	100	100
Quality	600	600	300	600	300	600
1st SGT	100	100	100	100	100	100
MS Superintendent	100	100	100	100	100	100
Orderly Room	600	600	600	600	600	600
LG Exec	100	100	100	100	100	100
Transportation Officer	100	100	100	100	100	100
Transportation ART	100	100	100	100	100	100
Fuels ART	100	100	100	100	100	100
Contracting	100	100	100	100	100	100
Supply ART	100	100	100	100	100	100
LG Conference Room	600	600	600	600	600	600
Classrooms 5 @ 200	1,000	1,000	1,000	1,000	1,000	1,000
Computer Rm/Tech Order Library	400	400	400	400	400	400
Financial	150	150	150	150	150	150
Training Office	150	150	150	150	150	150
Analysis	300	300	300	300	300	300
Programs & Mobility	150	150	150	150	150	150
MSL	1,500	1,500	2,000	2,000	2,000	2,000
Communications/Electrical	200	200	210	220	210	220
Subtotal	6,940	6,940	7,150	7,460	7,150	7,460
Overhead (30%)	2,080	2,080	2,150	2,240	2,150	2,240
TOTAL	9,020	9,020	9,300	9,700	9,300	9,700

10.2. Basic Item 610-128, Base Personnel Office. Space requirement is provided under Category Code 171-445.

10.3. Basic Item 610-243, Group Headquarters. Space requirement is provided under Category Code 171-445.

10.4. Basic Item 610-249, Wing Headquarters. When authorized, space requirements are provided under Category Code 171-445.

10.5. Basic Item 610-911, Social Actions Facility. The social actions function includes space for a counseling room, group activities room, and staff and administrative offices. Sharing of an

existing classroom is expected to fulfill the classroom requirement. Space is included in category-code 171-445, Reserve Forces Operational and Training Facility.

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